

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 14170-061001	Application No. 09/996,978
		Applicant Mark D. Markel	
		Filing Date October 31, 2001	Group Art Unit 3739

**Information Disclosure Statement  
by Applicant**  
(Use several sheets if necessary)

(37 CFR §1.98(b))

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	A1					
A.R.	B1	5,843,078		SHARKEY	12/01/1998	
	C1	5,814,040		NELSON et al.	09/29/1998	
	D1	5,810,809		RYDELL	08/1998	
	E1	5,782,795		BAYS	07/1998	
	F1	5,718,702		EDWARDS	02/1998	
A.R.	G1	5,697,909		EGGERS et al.	12/1997	
	H1					
A.R.	I1	5,688,270		YATES et al.	11/1997	
	J1	5,683,366		EGGERS et al.	11/1997	
	K1	5,681,282		EGGERS et al.	10/1997	
	L1	5,630,839		CORBETT, III et al.	05/1997	
	M1	5,599,346		EDWARDS et al.	02/1997	
	N1	5,569,242		LAX et al.	10/1996	
	O1	5,542,920		CHEIKH	08/1996	
	P1	5,527,331		KRESCH et al.	06/1996	
A.R.	Q1	5,524,338		MARTYNIUK et al.	06/1996	
	R1					

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FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>4</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
A.R.	S1	EP.	0 257 116	A1	Teletronics N.V.	03/1988		
	T1	EP.	0 274 705	A1	Erinrud Frimberger	07/1988	abstract	
	U1	EP.	0 479 482	A1	Megadyne Medical Products Inc.	04/1992		
	V1	EP.	0 521 595	A2	Lundquist, I.	01/1993		
	W1	EP.	0 542 412	A1	Everest Medical Corp.	05/1993		
	X1	EP.	0 558 297	A2	Japan Crescent Inc.	09/1993		
A.R.	Y1	EP.	0 566 450	A1	Inst. Nat Sante Rech. Med	10/1993	abstract	
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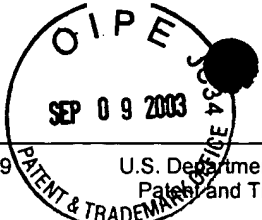
Examiner Signature 	Date Considered 1/31/2004
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	A2					
A.R.	B2	5,507,812		MOORE	04/1996	
	C2	5,500,012		BRUCKER et al.	03/1996	
	D2	5,498,258		HAKKY et al.	03/1996	
	E2	5,487,757		TRUCKAI et al.	01/1996	
	F2	5,486,170		WINSTON et al.	01/23/1996	
	G2	5,484,435		FLEENOR et al.	01/1996	
	H2	5,484,432		SAND	01/1996	
	I2	5,484,403		YOAKUM et al.	01/1996	
	J2	5,465,737		SCHACHAR	11/1995	
A.R.	K2	5,464,023		VIERA	11/1995	
	L2					
A.R.	M2	5,451,223		BEN-SIMHON	09/1995	
	N2	5,437,662		NARDELLA	08/01/1995	
A.R.	O2	5,437,661		RIESER	08/1995	
	P2					
	Q2					
	R2					

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		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
A.R.	S2	EP.	0 572 131	A1	Everest Medical Corp.	12/1993		
	T2	EP.	0 682 910	A1	Guenther et al.	11/1995	abstract	
	U2	EP.	0 479 482	B1	Megadyne Medical Products Inc.	05/1996		
	V2	EP.	0 729 730	A1	Aust, Gilbert et al.	09/1996		
	W2	EP.	0 737 487	A2	Cardiorhythm	10/1996		
	X2	EP.	0 783 903	A1	Bruker Sa	07/1997	abstract	
A.R.	Y2	FR.	1122634		Technomed Int. Sa	09/1956	abstract	
	Z2							

Examiner Signature	<i>Robert P. [Signature]</i>	Date Considered	11/31/2004
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	Applicant Mark D. Markel			
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A.R.	A3	5,433,739		SLUIJTER et al.	07/1995	
	B3	5,428,699		PON	07/27/1995	
	C3	5,423,806		DALE et al.	06/1995	
	D3	5,415,633		LAZARUS et al.	05/1995	
	E3	5,409,481		POPPAS et al.	04/25/1995	
	F3	5,401,272		PERKINS	03/1995	
	G3	5,397,304		TRUCKAI	03/1995	
	H3	5,382,247		CIMINO et al.	01/1995	
	I3	5,366,490		EDWARDS et al.	11/1994	
	J3	5,366,443		EGGERS et al.	11/1994	
	K3	5,364,395		WEST, JR.	11/1994	
	L3	5,354,331		SCHACHAR	10/1994	
	M3	5,352,868		DENEN et al.	10/1994	
	N3	5,348,554		IMRAN et al.	09/1994	
	O3	5,342,357		NARDELLA	08/1994	
	P3	5,334,193		NARDELLA	08/1994	
A.R.	Q3	5,323,778		KANDARPA et al.	06/1994	
	R3					

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Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)			
A.R.	S3	FR.	2 645 008		Technomed Int. SA	03/1989	abstract
	T3	DE.	3511107	A1	Fischer Met Gmbh	10/1986	abstract
	U3	DE.	3632197	A1	Audi Nsu Auto Union	03/1988	abstract
	V3	JP.	05-042166		Inter Noba KK	05/1993	abstract
	W3	SU.	637118	A	Movshovich et al.	12/1978	
	X3	GB.	1 340 451		Golyakhovsky	12/1973	
A.R.	Y3	GB.	2 164 473	A	C R Bard Inc.	03/1986	
	Z3						

Examiner Signature	<i>Adrian B. B...</i>	Date Considered	1/31/2004
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	Applicant Mark D. Markel		
	Filing Date October 31, 2001	Group Art Unit 3739	

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		Number	Kind Code <sup>2</sup> (if known)			
A.R.	A4	5,320,115		KENNA	06/1994	
	B4	5,311,858		ADAIR	05/1994	
	C4	5,308,311		EGGERS et al.	05/1994	
	D4	5,304,169		SAND	04/1994	
	E4	5,284,479		DE JONG	02/1994	
	F4	5,275,151		SHOCKEY et al.	01/1994	
	G4	5,267,994		GENTELIA et al.	12/1993	
	H4	5,261,906		PENNINO et al.	11/1993	
	I4	5,242,441		AVITALL	09/1993	
	J4	5,242,439		LARSEN et al.	09/1993	
	K4	5,230,334		KLOPOTEK	07/1993	
	L4	5,213,097		ZEINDLER	05/1993	
	M4	5,201,731		HAKKY	04/1993	
	N4	5,201,730		EASLEY et al.	04/1993	
	O4	5,201,729		HERTZMANN et al.	04/1993	
	P4	5,192,267		SHAPIRA et al.	03/1993	
A.R.	Q4	5,191,883		LENNOX et al.	03/1993	
	R4					

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		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
A.R.	S4	WO	WO 85/02762	A1	Kh Hii Obschei Noetlozh Khirug	07/1985	abstract	
	T4	WO	WO 92/10142	A1	Pfizer Hospital Products Group	06/1992		
	U4	WO	WO 93/01774	A1	Boeckmann Alfred Dipl Ing	02/1993	abstract	
	V4	WO	WO 93/16648	A1	Kensey Nash Corp.	09/1993		
	W4	WO	WO 93/20984	A1	Zhi et al.	10/1993		
A.R.	X4	WO	WO 95/01814	A1	Urologix Inc.	01/1995		
	Y4	WO	WO 95/13113	A1	Somed International Inc.	05/1995		
	Z4							

Examiner Signature	<i>Adrian P. Hane</i>	Date Considered	1/31/2004
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<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)		Applicant Mark D. Markel	
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		Number	Kind Code <sup>2</sup> (if known)			
A.R.	A5	5,186,181		FRANCONI et al.	02/1993	
	B5	5,178,620		EGGERS et al.	01/1993	
	C5	5,103,804		ABELE et al.	04/1992	
	D5	5,100,402		FAN	03/1992	
	E5	5,098,430		FLEENOR	03/1992	
	F5	5,085,659		RYDELL	02/1992	
	G5	5,085,657		BEN-SIMHON	02/1992	
	H5	5,027,792		MEYER	07/02/1991	
	I5	5,009,656		REIMELS	04/1991	
	J5	5,007,908		RYDELL	04/1991	
	K5	4,998,933		EGGERS et al.	03/1991	
	L5	4,976,715		BAYS et al.	12/1990	
	M5	4,976,709		SAND	12/1990	
	N5	4,966,597		COSMAN	10/1990	
	O5	4,955,882		HAKKY	09/1990	
	P5	4,950,234		FUJIOKA et al.	08/1990	
A.R.	Q5	4,944,727		MCCOY	07/1990	
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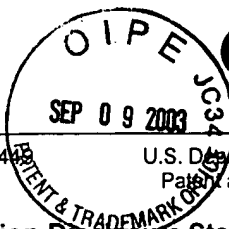
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		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
A.R.	S5	WO	WO 95/18575	A1	Vadamed, Inc.	07/1995		
	T5	WO	WO 95/20360	A1	Valley lab Inc.	08/1995		
	U5	WO	WO 95/25471	A2	Valleylab Inc.	09/1995		
	V5	WO	WO 95/30373	A1	Dorsal Orthopedic Corp.	11/1995		
	W5	WO	WO 95/30377	A1	Dahlstrand	11/1995		
	X5	WO	WO 95/34259	A1	Desai et al.	12/1995		
A.R.	Y5	WO	WO 96/11638	A1	Femrx	04/1996		
	Z5							

Examiner Signature	<i>Carson Boone</i>	Date Considered	1/31/2004
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A.R.	A6	4,924,865		BAYS et al.	05/1990	
	B6	4,907,589		COSMAN	03/1990	
	C6	4,907,585		SCHACHAR	03/1990	
	D6	4,895,148		BAYS et al.	01/1990	
	E6	4,894,063		NASHEF	01/1990	
	F6	4,873,976		SCHREIBER	10/1989	
	G6	4,838,859		STRASSMANN	06/1989	
	H6	4,815,462		CLARK	03/1989	
	I6	4,811,733		BORSANYI et al.	03/1989	
	J6	4,651,734		DOSS et al.	03/1987	
	K6	4,601,705		MCCOY	07/1986	
	L6	4,597,379		KIHN et al.	07/1986	
	M6	4,593,691		LINDSTROM et al.	06/1986	
	N6	4,590,934		MALIS et al.	05/1986	
	O6	4,517,975		GARITO et al.	05/1985	
	P6	4,517,965		ELLISON	05/1985	
A.R.	Q6	4,483,338		BLOOM et al.	11/1984	
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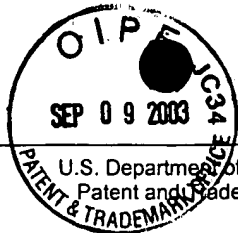
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A.R.	S6	WO	WO 96/32051	A1	Arthrocare Corp.	10/1996		
	T6	WO	WO 96/34568	A1	Knowlton, E.	11/1996		
	U6	WO	WO 96/34571	A1	Cosman, E.	11/1996		
	V6	WO	WO 96/39914	A1	Arthrocare Corp.	12/1996		
	W6	WO	WO 97/06855	A2	Rita Medical Systems, Inc.	02/1997		
A.R.	X6	WO	WO 98/07468	A1	Oratec Interventions, Inc.	02/1998		
	Y6							
	Z6							

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Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 14170-061001	Application No. 09/996,978
		Applicant Mark D. Markel	
		Filing Date October 31, 2001	Group Art Unit 3739

**Information Disclosure Statement  
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(37 CFR §1.98(b))

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
A.K.	A7	4,476,862		PAO	10/1984	
	B7	4,397,314		VAGUINE	08/1983	
	C7	4,381,007		DOSS	04/1983	
	D7	4,375,220		MATVIAS	03/1983	
	E7	4,362,160		HILTEBRANDT	12/1982	
	F7	4,344,193		KENNY	08/1982	
	G7	4,326,529		DOSS et al.	04/1982	
	H7	4,224,697		MURRAY et al.	09/1980	
	I7	4,224,696		MURRAY et al.	09/1980	
	J7	4,134,406		IGLESIAS	01/1979	
	K7	4,129,470		HOMSY	12/1978	
	L7	4,085,466		GOODFELLOW et al.	04/1978	
	M7	4,074,718		MORRISON	02/1978	
	N7	4,043,342		MORRISON, JR.	08/1977	
	O7	3,992,725		HOMSY	11/1976	
	P7	3,987,499		SCHARBACH et al.	10/1976	
A.K.	Q7	3,945,375		BANKO	03/1976	
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FOREIGN PATENT DOCUMENTS							
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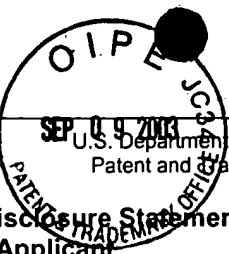
Examiner Signature	<i>Adrian Boone</i>	Date Considered	1/31/2004
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<sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English Language Translation is attached.

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14170-061001Application No.  
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Applicant  
Mark D. MarkelFiling Date  
October 31, 2001Group Art Unit  
3739

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## U.S. PATENT DOCUMENTS

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		Number	Kind Code <sup>2</sup> (if known)			
A.R.	A8	3,938,198		KAHN et al.	02/1976	
	B8	3,886,600		KAHN et al.	06/1975	
	C8	3,879,767		SUBSTAD	04/1975	
	D8	3,867,728		SUBSTAD et al.	02/1975	
	E8	3,856,015		IGLESIAS	12/1974	
	F8	3,821,510		MUNCHERYAN	06/28/1974	
	G8	3,776,230		NEEFE	12/1973	
	H8	3,579,643		MORGAN	05/1971	
	I8	3,178,728		CHRISTENSEN	04/1965	
A.R.	J8	2,090,923		WAPPLER	08/1937	
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	Y8							
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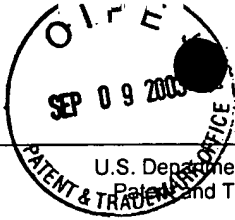
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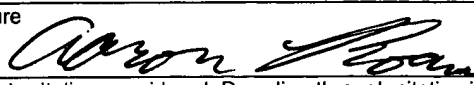
Substitute Form PTO-1449 (Modified)  <b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 14170-061001	Application No. 09/996,978
	Applicant Mark D. Markel		
	Filing Date October 31, 2001	Group Art Unit 3739	

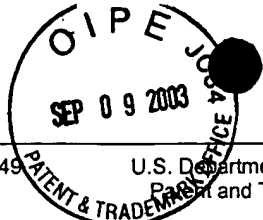
U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
A.R.	IA	6,602,248	8/5/03	Sharps et al.			
	IB	6,544,260	4/8/03	Markel et al.			
	IC	6,482,204	11/19/02	Lax et al.			
	ID	6,149,620	11/21/00	Baker et al.			
	IE	6,066,134	5/23/00	Eggers et al.			
	IF	5,609,151	3/11/97	Mulier et al.			
	IG	5,431,649	7/11/95	Mulier et al.			
A.R.	IH	5,725,524	3/10/98	Mulier et al.			
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Foreign Patent Documents or Published Foreign Patent Applications								
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	IL							
	IM							
	IN							
	IO							
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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
A.R.	A10	Attachment I: Competitive Literature on Generators with Bipolar Capabilities, IME Co., Ltd., pp. 60-86.	
I	B10	Attachment II: Competitive Literature on Bipolar Forceps and Footswitch Controls, IME Co., Ltd. pp. 87-104.	
A.R.	C10	AUHLL, Richard A., "The Use of the Resectoscope in Gynecology," Biomedical Business International. Oct. 11, 1990, pp. 91-93.	
	D10		
A.R.	E10	BOSACCO et al., "Functional Results of Percutaneous Laser Discectomy," The American Journal of Orthopedics, Dec. 1996, pp. 825-828.	
	F10	BROMM et al., "Nerve Fibre Discharges, Cerebral Potentials and Sensations Induced by CO2 laser Stimulation", Human Neurobiology, vol. 3, (1984) pp. 33-40.	
	G10	BUCHOLT et al., "Fluorescence Guided Excimer Laser Ablation of Intervertebral Discs In Vitro," Lasers in Surgery and Medicine, vol. 11, (1991) pp. 280-286.	
	H10	BUCHOLT et al., "Erb:YAG and Hol:YAG Laser Ablation of Meniscus and Intervertebral Discs," Lasers in Surgery and Medicine, vol. 12 No. 4, (1992) pp. 375-381.	
	I10	CHOY et al., "Percutaneous Laser Disc Decompression: A New Therapeutic Modality", Spine, vol. 17 No. 8, (1992) pp. 949-956.	
	J10	CHRISTIAN, C. et al., "Allograft Anterior Cruciate Ligament Reconstruction with Patellar Tendon: An Endoscopic Technique", Operative Techniques in Sports Medicine, vol. 1, No. 1, Jan. 1993, pp. 50-57.	
	K10	COSMAN et al., "Theoretical Aspects of Radiofrequency lesions in the Dorsal Root Entry Zone," Neurosurgery, vol. 15 No. 6 (1984) pp. 945-950.	
	L10	COSSET, J.M., Resistive Radiofrequency (Low Frequency) Interstitial Heating (RF Technique), Interstitial Hyperthermia, Dec. 6, 1993, pp. 2-5, 37.	
	M10	DAVIS, "Early experience with Laser Disc Decompression", Florida M.A., 79(1) 37-39 (1992).	
	N10	Ellman International Mfg., Inc., 1989, Catalog, pp. 1-15, 20.	
	O10	GEHRING W.J., "Exploring the Homeobox," Gene, 135, (1993), pp. 215-221.	
	P10	GERBER et al., Der Orthopade: Offene Laserchirurgie am Bewegungsapparat, vol. 25, (1996) pp. 56-63.	
A.R.	Q10	GOTTLÖB et al., "Holmium:YAG Laser Ablation of Human Intervertebral Disc: Preliminary Evaluation," Lasers in Surgery and Medicine, vol. 12, (1991) pp. 86-91.	
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	T10		

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<b>Information Disclosure Statement</b> by Applicant (Use several sheets if necessary)		Applicant Mark D. Markel	
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A.R.	A11	HOUP, J. et al., "Experimental Study of Temperature Distributions and Thermal Transport During Radiofrequency Current Therapy of the Intervertebral Disc", Spine, vol. 21, No. 15, (1996), pp. 1808-1813.	
	B11	Introduction to the LDD Disc Kit, Oct. 16, 1996.	
	C11	KELLY L.E., "Purification and Properties of a 23kDa Ca <sup>2+</sup> -binding Protein," Biochem. J. (1990) 271, pp. 661-666.	
	D11	KOLARIK et al., "Photonucleolysis of Intervertebral Disc and it's Herniation," Research Institute of Higher Nervous Activity, vol. 51; (1990) pp. 69-71.	
	E11	LEU et al., "Endoskopie der Wirbelsaule: Minimal-invasive Therapie," Der Orthopade, vol. 21, (1992) pp. 267-272.	
	F11	MAYER et al., "Lasers in Percutaneous Disc Surgery: Beneficial Technology or Gimmick?," Acta Orthop Scand., vol. 25 No. 251 (1993) pp. 38-44.	
	G11	McCULLOCH et al., "Percutaneous Radiofrequency Lumbar Rhizolysis (rhizotomy)," DMA Journal, vol. 116, 30-32, Jan. 8, 1977.	
	H11	MEHTA et al., "The Treatment of Chronic back Pain: A Preliminary survey of the Effect of Radiofrequency Denervation of the Posterior Vertebral Joints", Anaesthesia, vol. 34 (1979) pp. 768-775.	
	I11	PATIL et al., "Percutaneous Discectomy Using the Electromagnetic Field Focusing Probe: A Feasibility Study", Int. Surg., 76:30-32 (1991).	
	J11	PHILLIPS et al., "MR Imaging of Ho; YAG Laser Discectomy with Histologic Correlation", JMRI, vol. 3 No. 3, May/Jun. 1993.	
	K10	PRNewswire (Dec. 12, 1994), Two Physicians Perform First Outpatient Cervical Disc Procedure Using Laser Technology.	
	L10	QUIGLEY et al., "Laser Discectomy: Comparison of Systems", Spine, vol. 19 No. 3 (1994) pp. 319-322.	
	M11	SAVITZ M.A., "Same-day Microsurgical Arthroscopic lateral-approach Laser-assisted (SMALL) Fluoroscopic Discectomy," J. Neurosurg., vol. 80, Jun. 1994 pp. 1039-1045.	
	N11	SCHATZ et al., "Preliminary Experience With Percutaneous Laser Disc Decompression in the Treatment of Sciatica," CJS JCC, vol. 38, No. 5, Oct. 1995, pp. 432-436.	
	A.R.	O11	SLUIJTER et al., "Treatment of Chronic Back and Neck Pain by Percutaneous Therman Lesions," Persistent Pain: Modern Methods of Treatment, Vol. 3, Sampson Lipton E.D. 141-179 (1981).
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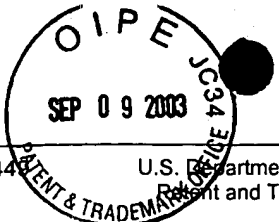
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		Applicant Mark D. Markel	
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A.R.	A12	SLUIJTER, "The use of Radio Frequency Lesions For Pain Relief in Failed Back Patients," Int Disabil Studies vol. 10(1), Sep. 4, 1996, pp. 37-43.	
	B12	SLUYTER, "Radiofrequency Lesions in the Treatment of Cervical Pain Syndromes," Radionics, Inc. 2-24 (1989).	
	C12	SMINIA et al., "Effects of 434 MHz Microwave Hyperthermia applied to the rat in the region of the cervical Spinal Cord," Int. J. Hyperthermia, vol. 3( 5): pp. 441-452 (1987).	
	D12	Trimedyn, The Less Invasive Laser Advantage, Omni Spinal Introduction System.	
	E12	TROUSSIER, B. et al., "Percutaneous Intradiscal Radio-Frequency Thermocoagulation: A Cadaveric Study", Spine, vol. 20, No. 15, (Aug. 1995), pp. 1713-1718.	
	F12	VORWERCK et al., "Laserablation des Nucleus Pulposus: Optische Eigenschaften von Degeneriertem Bandscheibengewebe im Wellenlangenbereich von 200 bis 2200nm", R&Fo, vol. 151 No. 6, (1989) pp. 725-728.	
	G12	WILKINS et al., Neurosurgery: Method of Making Nervous System Lesions, ch. 337, pp. 2490-2499.	
	H12	WOLGIN et al., "Excimer Ablation of Human Intervertebral Disc at 308 Nanometers", Lasers in Surgery and Medicine, vol. 9, (1989) pp. 124-131.	
A.R.	I12	YONEZAWA et al., "The System and Procedure of Percutaneous Intradiscal Laser Nucleotomy," Spine, vol. 15 No. 11 (1990).	
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